

The present invention provides a high-performance glucose sensor having excellent storage stability and an improved response characteristic. This sensor comprises: an electrically insulating base plate; an electrode system including at least a working electrode and a counter electrode formed on the base plate; and a reaction layer containing at least pyrrolo-quinoline quinone dependent glucose dehydrogenase, formed in contact with or in the vicinity of the electrode system, and the reaction layer contains at least one kind of additive selected from the group consisting of gluconic acid and salts thereof.